

# **THE INFLUENCE OF HERRINGBONE TECHNIQUE TOWARDS THE READING COMPREHENSION OF THE SECOND YEAR STUDENTS OF SMPN 4 SIAK HULU**

Irza Yuzulia; Mahdum Ph. D; Dra. Eliwarti, M. App.ling  
Email: irzayuzulia@gmail.com; mahdum1211@gmail.com; eliwartieliwarti@yahoo.com  
CP: 081371407356

Student of English Study Program  
Language and Arts Department  
Faculty of Teacher Training and Education  
Riau University

**Abstract:** *This pre-experimental research aimed to find out whether there is significant influence of students' reading comprehension after using Herringbone Technique in teaching reading at the second year of SMPN 4 Siak Hulu. Thus, the problem to be discussed is whether or not there is any significant influence of the students' reading comprehension after using Herringbone Technique in teaching reading at the second year of SMPN 4 Siak Hulu. The design of the research was one group pretest-posttest design. Cluster random sampling method was used to select one class to be the sample. As a result, 36 students of class VIII A at the second semester of academic year 2015/2016 were chosen as the sample. The steps applied in using herringbone technique are: (1) The teacher gives a brainstorming for the students by showing them a picture of animal related to the text (2) The teacher asks students' opinion about the picture (3) The teacher asks students to make groups (4) The students read the text to find the answers and record the answers on the diagram (5) The students write the main idea (6) The teacher guides class discussion. The instrument used was a reading test that consists of 38 questions and the obtained data were analyzed by using SPSS version 16.0 for Windows. The results of data analysis are t-test (13.58) was greater than t-table (2.042). This illustrates that there is significant influence of students' reading comprehension after being taught using Herringbone Technique in teaching reading.*

**Keywords:** *reading comprehension, herringbone technique*

## PENGARUH TEKNIK HERRINGBONE TERHADAP PEMAHAMAN MEMBACA SISWA KELAS 2 SMPN SIAK HULU

Irza Yuzulia; Mahdum Ph. D; Dra. Eliwarti, M. App.ling  
 Email: [irzayuzulia@gmail.com](mailto:irzayuzulia@gmail.com); [mahdum1211@gmail.com](mailto:mahdum1211@gmail.com); [eliwartieliwarti@yahoo.com](mailto:eliwartieliwarti@yahoo.com)  
 Kontak: 081371407356

Mahasiswa Program Studi Bahasa Inggris  
 Jurusan Bahasa dan Seni  
 Fakultas Keguruan dan Ilmu Pendidikan  
 Universitas Riau

**Abstrak:** Penelitian ini bertujuan untuk menyelidiki apakah terdapat pengaruh terhadap pemahaman membaca setelah menggunakan teknik *herringbone* dalam mengajar membaca pada siswa kelas VIII SMPN 4 Siak Hulu. Dengan demikian, permasalahan yang ingin dibahas adalah apakah terdapat pengaruh yang signifikan terhadap pemahaman membaca siswa kelas VIII SMPN 4 Siak Hulu setelah menggunakan teknik *herringbone* dalam mengajar membaca. Desain penelitian ini adalah *one group pretest-posttest experimental design*. Metode *cluster random sampling* digunakan untuk memilih satu kelas sebagai sampel. Sehingga, 36 siswa kelas VIII A semester genap terpilih menjadi sampel. Langkah-langkah pembelajaran menggunakan teknik *herringbone* adalah: (1) Guru memberikan brainstorming kepada siswa dengan memperlihatkan gambar hewan terkait dengan teks (2) Guru menanyakan pendapat siswa terkait dengan gambar (3) Guru memerintahkan siswa untuk membentuk grup (4) Siswa membaca teks secara individu untuk menemukan jawaban dan menulis jawaban kedalam diagram (5) Siswa menulis ide pokok (6) Guru memimpin diskusi kelas. Instrumen yang digunakan adalah tes membaca yang terdiri dari 38 soal dan data yang diperoleh kemudian dianalisis dengan menggunakan *SPSS version 16.0 for Windows*. Hasil analisis data adalah t-test (13.58) lebih besar dari t-table (2.042). Hal ini memberikan gambaran bahwa terdapat pengaruh yang signifikan pada pemahaman membaca siswa setelah menggunakan *herringbone* sebagai teknik dalam pengajaran membaca.

**Kata Kunci:** Pemahaman membaca, teknik *herringbone*

## INTRODUCTION

In learning English, reading is one of the skills which has important role to give information to the reader. Reading becomes an activity that cannot be separated from our daily live because it is a key to find the information either in social life or education areas. According to Grabe and Stoller (2002) reading is the ability to draw meaning and interpret the information from the printed page appropriately. In order to gain new information from reading text, a student or reader must be able to comprehend reading text. Comprehension is necessary to get the main information from the text. Without comprehension, reading would be meaningless.

Reading is a complex skill that involves all of higher mental process in order to understand what is read. Grabe (1991) says that reading is a comprehending process where strategies become the important element to be taught in order to read more efficiently (guess from the context, define expectations, make inference about the text, skim ahead to fill the context). It can be concluded that in reading process, someone needs some strategies to understand a text and to increase their comprehension. As reading is an important skill that must be achieved by the students, reading has already been taught from elementary level up to university level. Although reading is very important competence for students, they still have difficulties in learning reading.

Based on the writer's observation, the lack of students' interest to read the text, the lack of main idea, limited vocabularies and the ineffective technique applied by the teacher are probably the most causes of the students' difficulty in comprehending text. It was also supported by the students' score in reading lesson where more than 50 percent of the students got low score. The English teacher in junior high school generally teaches the students using direct instruction. On one hand, this method is good because the procedure is systematic and students are physically easy to monitor. On the other hand, this method made the students more passive because the interaction in learning process only happened between the teacher and the students. In addition, this method makes the students bored and they are not interesting to learn.

Reading is not an easy part to learn, because it needs technique to make reading easier to understand. Good teaching enables students to learn to read and read to learn, (Pang, *et al.*, 2003). In order to make students interested in reading, the teacher should use an appropriate and interesting technique in teaching and learning process. Interesting technique will make students more enthusiastic in learning reading so that the students will get better reading comprehension achievement.

One of the techniques that can be used is graphic organizer. McKnight (2010) states that graphic organizers are effective educational tools in facilitating learner's comprehension, for organizing content and ideas of newly acquired information. Herringbone Technique itself is a part of graphic organizer. The Herringbone technique is a structured outlining procedure designed to help students organize important information in a text. The Herringbone technique is intended for use with students in the fourth through twelve grade levels. This strategy is most appropriate for the students whose reading levels are below the difficulty levels of the adopted text (Tierney, *et al.*, 1980).

Deegan (2006) says that the Herringbone Technique develops comprehension of the main idea by plotting who, what, when, where, how and why questions on a visual diagram of a fish skeleton. Using the answer to the wh-questions, the students write the main idea across the backbone of the fish diagram. The fish diagram is used to help

students identify the main idea and the related supporting ideas of a lesson, text or concept. It contains six questions that help students organize the details of the text.

This research is conducted in order to know the influence of Herringbone Technique toward students' reading comprehension. This research is important to be investigated because of the phenomena in which students do not enjoy when they are given reading task and the fact that most students cannot comprehend the text because they tend to work individually and are not given a chance to share ideas with other friends. The result of the study is expected to give contribution and solution for a teacher in teaching reading more effectively, and students are expected to be easier in comprehending and mastering reading.

In conclusion, the writer wants to apply this technique in order to know the influence of Herringbone Technique towards students' reading comprehension. Therefore, the title of this research is as the following: The Influence of Herringbone Technique towards the Reading Comprehension of the Second Year Students of SMPN 4 Siak Hulu. Therefore, this research will answer the research question: "Is there any significant influence of the students' reading comprehension after using Herringbone Technique in teaching reading at the second year of SMPN 4 Siak Hulu in the academic year of 2015/2016"?

This research is expected to give remarkable contribution to the following: (1) Teacher, This research can be used as a reference of teaching technique especially in teaching reading, (2) Students, This research is expected to help the students easier in learning reading, (3) Writer, This research can be used as a reference in conducting further research in the same field.

## **RESEARCH METHODOLOGY**

The research design of this study is pre-experimental design which is one group pre-post design is applied. This research was conducted at SMP Negeri 4 Siak Hulu which is located on Jl. Pasir Putih, Siak Hulu. The population of the research is all students of second year in SMPN 4 Siak Hulu academic year 2015/2016. The total population of this research was 231 students. This research uses cluster random sampling. Since there are 9 classes, the writer put 9 cards into a box.. Then, the writer named the card on each class in SMPN 4 Siak Hulu. After that, the writer took one of the cards randomly without seeing the cards. Finally, the card which the writer took became the sample of the research. It turned out that VIII A class became the sample. The total number of the sample is 36 students.

The instrument that was used to get the data was a reading test. The tests were classified into five components of reading in general (factual information, main idea, vocabulary, reference and inference) and the generic structures of narrative text (orientation, complication and resolution). The data of this research is based on the result of the reading test in the pre-test and the post-test. The test was used to assess the students' achievement after the treatments were given. This result of test was analyzed statistically. The data was analyzed by using statistical analysis. In order to compare the results of the students' ability in writing, the t-test was used by employing SPSS version 16.0 for Windows.

## RESULTS AND DISCUSSIONS

### Results

The data was collected by giving reading test individually. They need to answer 38 questions which contains of five components of reading comprehension (main idea, factual information, guessing vocabulary, reference and inference) and Wh-questions (what, where, when, why, who, and how).

There were two kinds of test that students had, pre-test and post-test. A pre-test was given at the beginning of the research to find out the students' ability before the treatment. Furthermore, the second test was a posttest which was given after treatment. The test was designed based on the syllabus in 2013 curriculum.

### The results of the Pre-Test

The pre-test was given by asking students to answer the question about narrative text. The test was done before treatment process by giving herringbone technique in teaching reading narrative text comprehension. This test was intended to know the students reading achievement before the students got treatment. The result of students' score in pre test was shown in the Table 4.1 below.

**Table 4.1 Frequency of Post Test**

Pre_Test					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	50	1	2.8	2.8	2.8
	53	2	5.6	5.6	8.3
	55	4	11.1	11.1	19.4
	58	5	13.9	13.9	33.3
	60	9	25.0	25.0	58.3
	63	5	13.9	13.9	72.2
	66	3	8.3	8.3	80.6
	68	2	5.6	5.6	86.1
	71	1	2.8	2.8	88.9
	74	1	2.8	2.8	91.7
	76	2	5.6	5.6	97.2
	84	1	2.8	2.8	100.0
	Total	36	100.0	100.0	

From the table 4.3, it was compatible with the criteria of students' score, it was found that student who got score 50, 53, 55, 58 and 60 showed that their ability of reading comprehension was categorized as mediocre. Students who got 63, 66, 68, 71,

74 and 76 were categorized as good. Finally, the students who got score 84 was categorized as excellent.

### The Results of the Post-Test

The test was done after treatment process by giving herringbone technique. This test was intended to know the students reading achievement after being taught using herringbone technique. The data of students' achievement of post-test could be seen in the table 4.2.

**Table 4.2 Frequency of Post Test**

Post Test					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	63	1	2.8	2.8	2.8
	66	3	8.3	8.3	11.1
	68	6	16.7	16.7	27.8
	71	4	11.1	11.1	38.9
	74	1	2.8	2.8	41.7
	76	5	13.9	13.9	55.6
	79	7	19.4	19.4	75.0
	81	5	13.9	13.9	88.9
	87	1	2.8	2.8	91.7
	89	2	5.6	5.6	97.2
	95	1	2.8	2.8	100.0
	Total	36	100.0	100.0	

From the table 4.5, it was compatible with the criteria of students' score, it was found that students who got score 63, 66, 68, 71, 74, 76, and 79 showed that their ability

of reading comprehension were categorized as good. Students who got 81, 87, 89 and 95 were categorized as excellent.

So, there are differences in data presentation between before being taught by using herringbone technique and after being taught by using herringbone technique. The data showed that the score after being taught by using herringbone technique was better and higher than was before using herringbone technique

### The Results of T-test Table

In this research, “t” test formula was used to compare the pre-test and post-test results in determining whether the hypothesis could be accepted and also measuring whether the instruments in treatment could give an effect on students’ reading comprehension or not.

In performing pre-experimental research, hypothesis was required to see whether there is a difference after the activities was completely performed. The mean of pretest score (X) achieved by the first year students was 62.11. Furthermore, when the treatment had been given to the students, the enhancement of students’ reading comprehension occurred.

The improvement could be seen in their mean score as shown in posttest results (Y), 75.69. the margin of pretest and posttest achieved was 13.58. Aside from the enhancement score of pretest and posttest, in order for the hypothesis could be accepted, the results of ‘t’ test formula is also required. The ‘t’ test formula shown in table 4.3

$$\begin{aligned} t \text{ table} &= n-1 (\alpha 5\%) \\ &= 36-1 (\alpha 5\%) \\ &= 35 (\alpha 5\%) \\ &= 2.042 \end{aligned}$$

**Table 4.3 T-test Table**

	Mean	N	Std. Deviation	Std. Error Mean
Post-test	75,6944	36	7,48644	1,24774
Pre-test	62,1111	36	7,25762	1,20960

Based on the table 4.3, the mean score of pre-test is 62.11 and in the post – test is 75.69. The difference of the mean score between pre-test and post-test is 13.58. The gap of mean score shows an effect of students’ reading comprehension in the reading test. Standard deviation is a values spread in the sample, while standard error mean is an estimate of standard deviation. The spread of values in the sample pre-test is 7.25, while standard error of mean is 1.20. The standard deviation and standard error of mean of post-test are 7.48 and standard error of mean is 1.24.

**Table 4.4 Paired Sample Correlation**

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre-test & Post-test	36	.886	.000

After knowing the mean, the standard deviation, and the standard error score, there was paired samples correlation table that explained the correlation of pre-test and post-test. According to table 4.4, the correlation coefficient was 0.886 which the numbers of students are 36 students.

To know the influence of Herringbone Technique on students' reading comprehension in narrative text, the writer used the table of classification which adopted from Sudijono (2009). The classification of the correlation coefficient of students can be shown on table 4.5 below:

**Table 4.5 Classification of Correlation Coefficient**

No.	The Value of "r" Product Moment ( $r_{xy}$ )	Interpretation
1	0.00 – 0.20	There is such a correlation between variable x and y. However, the correlation is <i>very weak</i> and therefore that correlation can be ignored
2	0.20 – 0.40	The correlation between variable x and y is <i>weak</i>
3	0.40 – 0.70	The correlation between variable x and y is <i>mediocre</i>
4	0.70 – 0.90	The correlation between variable x and y is <i>strong</i>
5	0.90 – 1.00	The correlation between variable x and y is <i>very strong</i>

(Sudijono, 2009)

Based on table 4.4, the correlation score of 0.886 means the correlation between variable x and y is strong. The probability of (Sig.) 0.000 is smaller than 0.005 also shows a strong correlation of Herringbone Technique for the students' reading comprehension in Narrative text.



**Table 4.6 Paired Sample Test**

	Paired Differences				
				95% Confidence Interval of the Difference	
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper
Post-test	13,5833	3,52440	.58740	12,39085	14,77582
Pre-test					

Table 4.6 shows the results of the t-test is 13.58, meanwhile t-table is 2.042. The t-test is higher than the t-table. It can be concluded that there is a significant differences between the pre-test and the post-test. In other words, the alternative hypothesis of this research, "There is significant influence of the students' reading comprehension after using Herringbone Technique in teaching reading at the second year of SMPN 4 Siak Hulu in the academic year of 2015/2016." was accepted and null hypothesis was rejected.

## Discussion

Based on the description of data, the researcher can say that herringbone technique is applicable for teaching English narrative reading. The results shows that the post-test is better than the pre-test which indicated the improvement of students' reading comprehension in narrative text, especially fable.

Based on the research method, the teaching learning process was divided into three steps. First step is giving the students pre-test in order to know their ability before herringbone technique is applied. The second step is by giving treatment, as many as 6 meetings. The treatment is applying Herringbone technique in teaching reading narrative text, specifically fable. The students have to find the main idea by plotting WH questions. The class is divided into five groups. Each group consists of 4-5 students. The last step is giving the students post test for the students to know the students' ability after they gave a treatment by using herringbone technique.

The experiment has an effort to get some improvement in the teaching reading to the eighth grade students of the junior high school students. The discussions of the finding are as follows:

1. Teaching reading by using herringbone technique is effective for the second grade students of SMPN 4 Siak Hulu in the academic year 2015/2016. According to Thaler (2008), Herringbone technique is a useful technique for analyzing a single idea or text, which resembles a fish skeleton. The result of the test of the test from teaching reading comprehension by using herringbone technique shows that the students could understand the text. They are able to understand the content of the text easily and find the main idea of the text.

2. Herringbone technique makes students more active because they can interact with another. By grouping the students, the class environment will be more fun and enjoyable. They can share their ideas and help each other to fill the herringbone diagram. Herringbone Technique also helps the students spend a few times while they are reading the text, so the students will not get bored while they are reading the text.
3. It is proved that a graphic organizer such as Herringbone gives a positive impact for students' ability in comprehending text. McKnight (2010) states that graphic organizers are effective educational tools in facilitating learner's comprehension, for organizing content and ideas of newly acquired information. As a graphic organizer, herringbone works efficiently as the tools for the students to comprehend the text. These 5WH question which used in the diagram, makes the students easily understand the story by answering the list of questions.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

The students' reading comprehension before taught by using herringbone technique was mediocre. The data showed that there were 21 students got score between 41-60, it means that on the students' reading comprehension was in mediocre level. 14 students got score between 61-80 it means that on the students' reading comprehension was good, and there was only one students getting score 84, which means that on the students' reading comprehension was excellent. So, the mean of pretest calculation 62.11 was good.

The students' reading comprehension after taught by using herringbone technique was good. The data showed that there were 27 students got score between 61-80, it means that on the students' reading comprehension was good. 9 students got score between 81-100, it means that on the students' reading comprehension was excellent. So, the mean of posttest calculation 75.69 was good.

Based on the result of data analysis, it can be concluded that herringbone technique gives significant influence for students in comprehending narrative text especially for the eighth grade students of SMPN 4 Siak Hulu. Herringbone technique becomes a tool for the students in order to gain information from the text. It is because they only need to focus answering 5WH questions and writing the main idea on the diagram.

## Recommendations

The results of the research showed that the students' reading comprehension improves significantly. There were significant differences of the students' reading comprehension before and after being taught using herringbone technique. The average score before taught using herringbone technique showed 62.11 while the average score after being taught using herringbone technique showed 75.69.

After getting the result of the study in this research, the writer would like to give some suggestions which can be used to teach narrative text as follows:

1. The English teacher can apply herringbone technique as one of the techniques in teaching reading especially narrative text since it is proved that this technique gives positive influence for students' reading comprehension
2. It is suggested that the English teacher is better to explain the procedure of this technique more clearly to the students, so that the students can understand the purpose of finding the supporting details and main idea, as well as correlating the supporting details into a correct main idea.
3. The English teacher is suggested to explain about how to understand the implicit meaning from the text, so the students do not need to translate the text word by word.
4. The English teacher is suggested to select the texts can be used in order to find the question of what, when, where, who, why and how.

## BIBLIOGRAPHY

Grabe, William. 1991. *Current Developments in Second Language Reading Research*. TESOL Quarterly.

Grabe, W. & F. L. Stoller. 2002. *Teaching and Researching Reading*. Harlow: Pearson Education Ltd.

Pang E. S., Muaka A., Bernhardt E. B., Kamil M. L. 2003. *International Academy Education; Teaching Reading*. Chicago: University of Illionis.

McKnight, Katherine S. 2010. *The Teacher's Big Book of Graphic Organizers: 100 Reproducible Organizers that Help Kids with Reading, Writing, and the Content Areas*. San Fransisco : Jossey- Bass.

Deegan. J. 2006. *Herringbone Technique*. (Online). <http://teacherweb.com/PA/NazarethAreaMiddleSchool/TheSpecialistTeam/HerringboneTechnique.doc> (accessed on May 24, 2014).

Tierney, Robert J. 1980. *Readung Strategies and Practice Guide for Improving instruction*. Atlantic Avenue: Boston.